ELSEVIER

Comput. Methods Appl. Mech. Engrg. 157 (1998) 441–442

**Computer methods in applied mechanics and engineering**

# Author Index of Volume 157

Andrä, H. Integration of singular integrals for the Galerkin-type boundary element method in 3D elasticity 239–249

Borouchaki, H. see Frey, P.J. 115–131
Bratsos, A.G. The solution of the Boussinesq equation using the method of lines 33– 44
Briseghella, L., Majorana, C. and Pavan, P. Exact evaluation of dissipation for elastic-damage model dynamics 11– 18

Cao, W. see Guo, B. 425–440
Carranza, F.L., Fang, B. and Haber, R.B. An adaptive space–time finite element model for oxidation-driven fracture 399–423
Chippada, S., Dawson, C.N., Martínez, M.L. and Wheeler, M.F. A projection method for constructing a mass conservative velocity field 1– 10
Costabel, M., Dauge, M. and Suri, M. Numerical approximation of a singularly perturbed contact problem 349–363

Dauge, M. see Costabel, M. 349–363
Dauge, M. and Gruais, I. Edge layers in thin elastic plates 335–347
Dawson, C.N. see Chippada, S. 1– 10

Erichsen, S. and Sauter, S.A. Efficient automatic quadrature in 3-d Galerkin BEM 215–224

Fang, B. see Carranza, F.L. 399–423
Farhat, C., Lesoinne, M. and LeTallec, P. Load and motion transfer algorithms for fluid/structure interaction problems with non-matching discrete interfaces: Momentum and energy conservation, optimal discretization and application to aeroelasticity 95–114
Frey, P.J., Borouchaki, H. and George, P.-L. 3D Delaunay mesh generation coupled with an advancing-front approach 115–131

Gáspár, C. A multipole expansion technique in solving boundary integral equations 289–297
George, P.-L. see Frey, P.J. 115–131
Gruais, I. see Dauge, M. 335–347
Guo, B. and Cao, W. Domain decomposition method for the h-p version finite element method 425–440

Haber, R.B. see Carranza, F.L. 399–423
Haftka, R.T. see Lombardi, M. 19– 31

Křížek, M. and Liu, L. Finite element approximation of a nonlinear heat conduction problem in anisotropic media 387–397

Kuhn, M. The application of coupled BE/FE formulations in technical magnetic field computations 193–204

Ladevèze, P. and Moës, N. A new a posteriori error estimation for nonlinear time-dependent finite element analysis 45– 68
Lage, C. The application of object-oriented methods to boundary elements 205–213
Lesoinne, M. see Farhat, C. 95–114
LeTallec, P. see Farhat, C. 95–114
Liu, L. see Křížek, M. 387–397
Lombardi, M. and Haftka, R.T. Anti-optimization technique for structural design under load uncertainties 19– 31

Majorana, C. see Briseghella, L. 11– 18
Martínez, M.L. see Chippada, S. 1– 10
Maurits, N.M., van der Ven, H. and Veldman, A.E.P. Explicit multi-time stepping methods for convection-dominated flow problems 133–150
Mittal, S. Finite element computation of unsteady viscous compressible flows 151–175
Moës, N. see Ladevèze, P. 45– 68
Moulinec, H. and Suquet, P. A numerical method for computing the overall response of nonlinear composites with complex microstructure 69– 94

Pavan, P. see Briseghella, L. 11– 18

Rathsfeld, A. A wavelet algorithm for the boundary element solution of a geodetic boundary value problem 267–287

Sauter, S.A. see Erichsen, S. 215–224
Schnack, E., Szikrai, Sz. and Türke, K. Local effects in engineering with macro-elements 299–309
Schulz, H., Schwab, C. and Wendland, W.L. The computation of potentials near and on the boundary by an extraction technique for boundary element methods 225–238
Schwab, C. see Schulz, H. 225–238
Schwab, C., Suri, M. and Xenophontos, C. The hp finite element method for problems in mechanics with boundary layer 311–333
Sladek, J. see Sladek, V. 251–266
Sladek, V. and Sladek, J. Singular integrals and boundary elements 251–266
Steinbach, O. Fast solution techniques for the symmetric boundary element method in linear elasticity 185–191
Suquet, P. see Moulinec, H. 69– 94
Suri, M. see Costabel, M. 349–363
Suri, M. see Schwab, C. 311–333
Szikrai, Sz. see Schnack, E. 299–309

Türke, K. see Schnack, E. 299–309

van der Ven, H. see Maurits, N.M. 133–150
Veldman, A.E.P. see Maurits, N.M. 133–150

Wendland, W.L. see Schulz, H. 225–238
Wheeler, M.F. see Chippada, S. 1– 10

Xenophontos, C. see Schwab, C. 311–333

Yosibash, Z. Thermal generalized stress intensity factors in 2-D domains 365–385

ELSEVIER

Comput. Methods Appl. Mech. Engrg. 157 (1998) 443–447

**Computer methods in applied mechanics and engineering**

# Subject Index of Volume 157

*Boundary element methods*

Fast solution techniques for the symmetric boundary element method in linear elasticity, O. Steinbach 185–191

The application of coupled BE/FE formulations in technical magnetic field computations, M. Kuhn 193–204

The application of object-oriented methods to boundary elements, C. Lage 205–213

Efficient automatic quadrature in 3-d Galerkin BEM, S. Erichsen and S.A. Sauter 215–224

The computation of potentials near and on the boundary by an extraction technique for boundary element methods, H. Schulz, C. Schwab and W.L. Wendland 225–238

Integration of singular integrals for the Galerkin-type boundary element method in 3D elasticity, H. Andrä 239–249

Singular integrals and boundary elements, V. Sladek and J. Sladek 251–266

A wavelet algorithm for the boundary element solution of a geodetic boundary value problem, A. Rathsfeld 267–287

A multipole expansion technique in solving boundary integral equations, C. Gáspár 289–297

Local effects in eingineering with macro-elements, E. Schnack, S. Szikrai and K. Türke 299–309

*Boundary layers*

The *hp* finite element method for problems in mechanics with boundary layer, C. Schwab, M. Suri and C. Xenophontos 311–333

Edge layers in thin elastic plates, M. Dauge and I. Gruais 335–347

*Collocation method*

A wavelet algorithm for the boundary element solution of a geodetic boundary value problem, A. Rathsfeld 267–287

*Composite materials*

A numerical method for computing the overall response of nonlinear composites with complex microstructure, H. Moulinec and P. Suquet 69– 94

*Coupled problems*

Load and motion transfer algorithms for fluid/structure interaction problems with non-matching discrete interfaces: Momentum and energy conservation, optimal discretization and application to aeroelasticity, C. Farhat, M. Lesoinne and P. LeTallec 95–114

*Damage and fracture mechanics*

Thermal generalized stress intensity factors in 2-D domains, Z. Yosibash 365–385

An adaptive space–time finite element model for oxidation-driven fracture, F.L. Carranza, B. Fang, R.B. Haber 399–423

*Design of programs*

The application of object-oriented methods to boundary elements, C. Lage 205–213

*Dynamics*

Load and motion transfer algorithms for fluid/structure interaction problems with non-matching discrete interfaces: Momentum and energy conservation, optimal discretization and application to aeroelasticity, C. Farhat, M. Lesoinne and P. LeTallec 95–114

Explicit multi-time stepping methods for convection-dominated flow problems, N.M. Maurits, H. van der Ven and A.E.P. Veldman 133–150

*Elasticity*

Fast solution techniques for the symmetric boundary element method in linear elasticity, O. Steinbach 185–191

Integration of singular integrals for the Galerkin-type boundary element method in 3D elasticity, H. Andrä 239–249

Local effects in eingineering with macro-elements, E. Schnack, S. Szikrai and K. Türke 299–309

Thermal generalized stress intensity factors in 2-D domains, Z. Yosibash 365–385

*Electromagnetic fields*

The application of coupled BE/FE formulations in technical magnetic field computations, M. Kuhn 193–204

*Finite difference methods*

The solution of the Boussinesq equation using the method of lines, A.G. Bratsos 33–44

Explicit multi-time stepping methods for convection-dominated flow problems, N.M. Maurits, H. van der Ven and A.E.P. Veldman 133–150

*Finite element and matrix methods*

A projection method for constructing a mass conservative velocity field, S. Chippada, C.N. Dawson, M.L. Martínez and M.F. Wheeler 1–10

Exact evaluation of dissipation for elastic-damage model dynamics, L. Briseghella, C. Majorana and P. Pavan 11–18

A new a posteriori error estimation for nonlinear time-dependent finite element analysis, P. Ladevèze and N. Moës 45–68

A numerical method for computing the overall response of nonlinear composites with complex microstructure, H. Moulinec and P. Suquet 69–94

Load and motion transfer algorithms for fluid/structure interaction problems with non-matching discrete interfaces: Momentum and energy conservation, optimal discretization and application to aeroelasticity, C. Farhat, M. Lesoinne and P. LeTallec 95–114

3D Delaunay mesh generation coupled with an advancing-front approach, P.J. Frey, H. Borouchaki and P.-L. George 115–131

Finite element computation of unsteady viscous compressible flows, S. Mittal 151–175

The application of coupled BE/FE formulations in technical magnetic field computations, M. Kuhn 193–204

The *hp* finite element method for problems in mechanics with boundary layer, C. Schwab, M. Suri and C. Xenophontos 311–333

Finite element approximation of a nonlinear heat conduction problem in anisotropic media, M. Křížek and L. Liu 387–397

Domain decomposition method for the *h-p* version finite element method, B. Guo and W. Cao 425–440

*Fluid mechanics*

Load and motion transfer algorithms for fluid/structure interaction problems with non-matching discrete interfaces: Momentum and energy conservation, optimal discretization and application to aeroelasticity, C. Farhat, M. Lesoinne and P. LeTallec 95–114

Explicit multi-time stepping methods for convection-dominated flow problems, N.M. Maurits, H. van der Ven and A.E.P. Veldman 133–150
Finite element computation of unsteady viscous compressible flows, S. Mittal 151–175

*Fracture mechanics*
Thermal generalized stress intensity factors in 2-D domains, Z. Yosibash 365–385
An adaptive space–time finite element model for oxidation-driven fracture, F.L. Carranza, B. Fang and R.B. Haber 399–423

*General Rayleigh–Ritz and Galerkin techniques*
Efficient automatic quadrature in 3-d Galerkin BEM, S. Erichsen and S.A. Sauter 215–224

*Nonlinear mechanics*
A new a posteriori error estimation for nonlinear time-dependent finite element analysis, P. Ladevèze and N. Moës 45– 68
A numerical method for computing the overall response of nonlinear composites with complex microstructure, H. Moulinec and P. Suquet 69– 94
Finite element approximation of a nonlinear heat conduction problem in anisotropic media, M. Křížek and L. Liu 387–397
An adaptive space–time finite element model for oxidation-driven fracture, F.L. Carranza, B. Fang and R.B. Haber 399–423

*Numerical solution procedures*
A projection method for constructing a mass conservative velocity field, S. Chippada, C.N. Dawson, M.L. Martínez and M.F. Wheeler 1– 10
Exact evaluation of dissipation for elastic-damage model dynamics, L. Briseghella, C. Majorana and P. Pavan 11– 18
3D Delaunay mesh generation coupled with an advancing-front approach, P.J. Frey, H. Borouchaki and P.-L. George 115–131
Explicit multi-time stepping methods for convection-dominated flow problems, N.M. Maurits, H. van der Ven and A.E.P. Veldman 133–150
Fast solution techniques for the symmetric boundary element method in linear elasticity, O. Steinbach 185–191
The application of object-oriented methods to boundary elements, C. Lage 205–213
Efficient automatic quadrature in 3-d Galerkin BEM, S. Erichsen and S.A. Sauter 215–224
The computation of potentials near and on the boundary by an extraction technique for boundary element methods, H. Schulz, C. Schwab and W.L. Wendland 225–238
Integration of singular integrals for the Galerkin-type boundary element method in 3D elasticity, H. Andrä 239–249
Singular integrals and boundary elements, V. Sladek and J. Sladek 251–266
A wavelet algorithm for the boundary element solution of a geodetic boundary value problem, A. Rathsfeld 267–287
A multipole expansion technique in solving boundary integral equations, C. Gáspár 289–297
Local effects in eingineering with macro-elements, E. Schnack, S. Szikrai and K. Türke 299–309
The *hp* finite element method for problems in mechanics with boundary layer, C. Schwab, M. Suri and C. Xenophontos 311–333
Edge layers in thin elastic plates, M. Dauge and I. Gruais 335–347
Numerical approximation of a singularly perturbed contact problem, M. Costabel, M. Dauge and M. Suri 349–363
Thermal generalized stress intensity factors in 2-D domains, Z. Yosibash 365–385
Finite element approximation of a nonlinear heat conduction problem in anisotropic media, M. Křížek and L. Liu 387–397

An adaptive space–time finite element model for oxidation-driven fracture, F.L. Carranza, B. Fang and R.B. Haber 399–423
Domain decomposition method for the *h-p* version finite element method, B. Guo and W. Cao 425–440

*Optimization*
Anti-optimization technique for structural design under load uncertainties, M. Lombardi and R.T. Haftka 19– 31

*Optimization and design of structures*
Anti-optimization technique for structural design under load uncertainties, M. Lombardi and R.T. Haftka 19– 31

*Plasticity*
Exact evaluation of dissipation for elastic-damage model dynamics, L. Briseghella, C. Majorana and P. Pavan 11– 18

*Shells and plates*
Edge layers in thin elastic plates, M. Dauge and I. Gruais 335–347

*Singularity methods*
Numerical approximation of a singularly perturbed contact problem, M. Costabel, M. Dauge and M. Suri 349–363

*Solution of integral equations (singularity'method)*
Fast solution techniques for the symmetric boundary element method in linear elasticity, O. Steinbach 185–191
The computation of potentials near and on the boundary by an extraction technique for boundary element methods, H. Schulz, C. Schwab and W.L. Wendland 225–238
Integration of singular integrals for the Galerkin-type boundary element method in 3D elasticity, H. Andrä 239–249
Singular integrals and boundary elements, V. Sladek and J. Sladek 251–266

*Solutions of ordinary and partial differential equations*
The solution of the Boussinesq equation using the method of lines, A.G. Bratsos 33– 44
Fast solution techniques for the symmetric boundary element method in linear elasticity, O. Steinbach 185–191
The computation of potentials near and on the boundary by an extraction technique for boundary element methods, H. Schulz, C. Schwab and W.L. Wendland 225–238
A wavelet algorithm for the boundary element solution of a geodetic boundary value problem, A. Rathsfeld 267–287
A multipole expansion technique in solving boundary integral equations, C. Gáspár 289–297

*Structural mechanics*
Load and motion transfer algorithms for fluid/structure interaction problems with non-matching discrete interfaces: Momentum and energy conservation, optimal discretization and application to aeroelasticity, C. Farhat, M. Lesoinne and P. LeTallec 95–114

*Systems of linear and nonlinear simultaneous equations*
A new a posteriori error estimation for nonlinear time-dependent finite element analysis, P. Ladevèze and N. Moës 45– 68
Domain decomposition method for the *h-p* version finite element method, B. Guo and W. Cao 425–440

*Thermal effects and thermodynamics*
Thermal generalized stress intensity factors in 2-D domains, Z. Yosibash 365–385
Finite element approximation of a nonlinear heat conduction problem in anisotropic media, M. Křížek and L. Liu 387–397

*Transport phenomena*
A projection method for constructing a mass conservative velocity field, S. Chippada, C.N. Dawson, M.L. Martínez and M.F. Wheeler 1– 10

*Viscoelastic and viscoplastic media*
A new a posteriori error estimation for nonlinear time-dependent finite element analysis, P. Ladevèze and N. Moës 45– 68

*Viscous flow*
Finite element computation of unsteady viscous compressible flows, S. Mittal 151–175